Monthly Wetland and Stream Corridor Restoration Update

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Welcome to the *Monthly Wetland and Stream Corridor Restoration Update.* This Web site

- Provides current information on wetland and stream corridor restoration projects
- Recognizes outstanding restoration projects
- Offers a forum for information sharing

We welcome the submission of articles and announcements related to your restoration project or program. Just send your write-up to EPA's contractor at restorationupdate@tetratech-ffx.com or mail it to Rebecca Schmidt, Monthly Restoration Update Coordinator, Tetra Tech, Inc., 10306 Eaton Place, Suite 340, Fairfax, VA 22030. We will carefully consider your submission for inclusion in a future update. If your submission is selected, please note that it might be edited for length or style before being posted. Because this Web site is meant to be a public forum on restoration information, we cannot post any information that is copyrighted or information that advocates or lobbies for any political, business, or commercial purposes or has the appearance of doing so.

Contents

Restoration-Related Web Sites (Page 9) - Use these links to check out other groups that are helping in the effort to restore wetlands and river corridors.

Information Resources (Page 10) - Books, journals, fact sheets, videos, and other information resources to aid you in your restoration project are provided here.

Feature Article

Students Transform Neglected Land Alongside Brokenstraw Creek

On Friday, October 11, 2002, nearly a year of hard work and preparation paid off for almost 300 students from Youngsville Middle and High Schools. The students had worked together to miraculously transform a dumping area for debris and junk into a beautiful environmental asset for the entire community. A riparian area once littered with rusty barrels and old tires now offers recreational and educational opportunities for community members.

Envisioned and initiated by Laura Tingley, Allegheny College senior and Creek Connections intern, this project speaks to the mountains (of debris!) that can be moved when people work together. With help from teacher Mrs. Dorunda, Laura involved the Youngsville students in numerous stages of the work, creating the ultimate learning experience for them. The student effort, along with outstanding leadership provided from fellow students Stephanie Pence, Chairman Stec, and James Davis, made the project possible. Financial and technical support from local businesses and community members made the project a reality.

Mrs. Nody Tingley, Laura's mother who helped with the project, said, "The students are to be commended. They've learned that working hard can be fun, too!" The students themselves echoed that sentiment, commenting on how great it was to see students who don't normally interact working side-by-side to achieve a common goal.

So what exactly did Laura and the Youngsville students do and how did they do it? Mr. Barry Tingley, mayor of Youngsville and Laura's father, explained that his daughter wanted to work with the school community to make something positive happen. She chose to improve a stretch of Brokenstraw Creek and its riparian area located one block from the school. To gather support for the effort she wrote letters and started meeting with the various project stakeholders of the project. Last summer, Laura started working with students to clear debris and make a memorial to students who had passed away.

They also wanted "to create an educational facility so that kids could learn about the environment in a nontraditional environment." This objective was met; a pavilion was funded and built for use by classes, creek water quality monitors, and community groups.

The project continued to progress in stages. During the big October workday and other workdays that followed, the students made several improvements to the creek and surrounding area. Their efforts included: (1) installing deflectors in the stream to keep the water flowing in the middle of the channel,

(2) installing shelves in the creek to provide trout habitat, (3) planting trees and shrubs in the riparian zone to beautify the area and provide better habitat, (4) establishing a memorial garden, and (5) creating experimental plots for the high school Forestry class to use. The Forestry students cleared and made interpretive trails as part of their coursework while life skills students contributed birdhouses to the project. The Science Club was also instrumental in the project. Club member Kaeli Freeborough said that she really enjoyed "getting outside rather than being inside," and that she is already "learning a lot about trees, habitats, and what lives in trees" just by working on this project.

In November students continued the work of placing stones and wood chips along trails, planting more trees, constructing more birdhouses, identifying and labeling trees, and creating other interpretive signs. Many students felt excited and satisfied to be involved in this Herculean effort. James Davis felt that the project will "make everyone appreciate our school a little more." Principal Tom Allison said he was pleased that "there was something positive going on and that students were really getting things cleaned up." Forestry student Clayton Beach, who was busy working on a trail, thought that the facility would "better the community." He added, "Now we have something that looks good back here!" And student council vice president Reyd Martin vowed that she and other delegates are "going to upkeep it after everything gets done."

Tingley hopes that teachers will take advantage of the new outdoor facility during their classes. Stephanie Williams, a Science Club member, expressed the "need to get the word out about the memorial park" to the rest of the community so that they will use it, too. After all, as Aaron Wismar pointed out, "There's not really a park like this [in Youngsville]."

This article was written by Nicole Mason, Creek Connections Module Coordinator. To learn more about Creek Connections and view its newsletter, visit http://creekconnections.alleg.edu.

If you'd like your project to appear as our next featured article, e-mail a short description to restorationupdate@tetratech-ffx.com.

Community-Based Restoration Partnerships

DTE Energy Foundation Funds Upper Jordan River Restoration Project

DTE Energy Foundation has agreed to provide $50,000 per year for the next 3 years toward Conservation Resource Alliance's River Care Program. To kick off the first year of the award, funding will be used to restore the Upper Jordan River that flows through mostly undeveloped and wild land in northwestern Michigan.

The first part of the Upper Jordan River Restoration Project involves constructing a new bridge over the Green River on Pinney Bridge Road, a major tributary to the upper Jordan River. The Antrim County Road Commission is preparing engineered plans for a new bridge of weatherized steel with a timber

deck. This design will allow for a natural stream bottom and will sufficiently encompass the width of the river channel. Revegetation and rock riprap will be incorporated for erosion control.

The second part of this project will remove the heavy sand bedload that accumulates in two sand traps along the upper Jordan River (300-foot long trap) and Landslide Creek (150-foot long trap). Michigan Department of Natural Resources' Fisheries Division will haul away the 900 cubic yards of pure sand that fills the traps every year.

The Upper Jordan River Project demonstrates the accomplishments that can be made through private and local support partnerships. Over the next 3 years, DTE Energy Foundation and the River Care Project will continue to restore stream habitat according to regional project needs.

Information for this article was drawn from Catalyst Northwest, the spring 2003 newsletter for the Conservation Resource Alliance. To contact the Alliance, call 231-946-6817, e-mail cra@traverse.com, or visit the Web site at www.rivercare.org.

Johnson Creek Project Builds Community Support for Invasive Species Removal

The Johnson Creek Watershed Revegetation Program, coordinated by the City of Portland's Bureau of Environmental Services, is now in its third year of removing nonnative plant species. The city has succeeded in getting the community behind the project. Over the past three years of the project, partners have included Oregon Watershed Enhancement Board, Clackamas County, Cities of Gresham and Milwaukee, Multnomah County, USDA Natural Resource Conservation Service, Oregon Department of Transportation, Johnson Creek Watershed Council, Friends of Trees, and private landowners.

The goals of the Johnson Creek Watershed Revegetation Program are to improve water quality, reduce bank erosion, shade waterbodies, enhance visual quality, improve wildlife habitat, and restore diverse native vegetation. To achieve these goals, restoration crews removed invasive plant species such as Himalayan blackberry and reed canarygrass, and replanted the stream banks with native plant species such as western red cedar, swamp rose, Pacific ninebark, black cottonwood, snowberry, and Oregon ash. The site will be monitored and maintained until December 2006 to help prevent the invasive species from returning.

More information about this project can be found in a City of Gresham news article online at www.ci.gresham.or.us/news/2002/070302.htm or by reading about the project on Salmon Friendly Power's Habitat Restoration Web site located at www.salmonpower.org/restore.html.

If you are part of an innovative community-based partnership that is working to restore river corridors or wetlands, we'd like to hear from you. Please send a short description of your partnership to restorationupdate@tetratech-ffx.com.

Achieving Restoration Results

More Water for Wildlife

Over the last few years, the Pinellas County, Florida Utilities Department has implemented a program at Cross Bar/AL-BAR Ranch to enhance natural wildlife habitat using a method called Wetlands Water Augmentation. Groundwater is pumped to the surface and discharged into a wetland system, providing for a man-made water resource replicating the historical hydrologic pattern that has occurred on the property. Nine wells are permitted to pump 2.1 million gallons per day, creating more than 270 acres of wetlands. The augmented wetlands provide a safe haven for typical wading birds and migratory bird species. A recent survey documented more than 165 bird species benefit from the increased habitat created by the program. For more information, contact the Pinellas County Utilities Department by calling 727-464-4000, sending an e-mail to custsrv@co.pinellas.fl.us, or visiting the Web site at http://pubgis.co.pinellas.fl.us/pcuweb_live/index.cfm.

Information for this story was gathered from the Pinellas County Environmental Foundation's 2002 annual report.

If you are part of an innovative restoration project that has had positive results, we'd like to hear from you. Please send a short description of your project to restorationupdate@tetratech-ffx.com.

Funding for Restoration Projects

Millions Available for California Nonpoint Source Pollution Control Projects

The California State Water Resources Control Board announces the availability of up to $138 million in watershed and nonpoint source grants. The funds are available through the Board's Division of Financial Assistance in partnership with the California Bay and Delta Authority, EPA, California Coastal Commission, and California Resources Agency.

Grants are available for the implementation of nonpoint source pollution control measures or watershed protection plans designed to reduce flooding, control erosion, improve water quality, and improve aquatic and terrestrial species habitats. A copy of the Request for Concept Proposals is available online at www.swrcb.ca.gov/funding/index.html#rfp.

Updated *Catalog of Federal Funding for Watershed Protection* Now Online

EPA has recently updated the *Catalog of Federal Funding Sources for Watershed Protection.* This catalog is now online as a searchable Web site. The Web site provides information for watershed practitioners and others on 84 federal funding sources that may be available to help fund various watershed-related projects. The Web site updates EPA's *Catalog of Federal Funding Sources for Watershed Protection* (EPA 841-B-99-003), which was previously published in 1999. This Web site was

developed by an Office of Water Finance Work Group with representatives from staff in the Office of Water. EPA plans to update the Web site on an ongoing basis. To view the site, visit www.epa.gov/watershedfunding.

Please send any news you have on funding mechanisms available to local community organizations to restorationupdate@tetratech-ffx.com.

News and Announcements

Wetland Restoration Planned for Old Field Creek

The Connecticut Department of Environmental Protection (DEP) is proposing to restore the Old Field Creek tidal marsh in West Haven, Connecticut, which has been degraded by tide gates located under Beach Street near Morse and Sandy Points. Efforts will focus on stopping the ongoing degradation, restoring wetland functions and values to the fullest extent possible, and ensuring that the restoration will not increase flood frequency to low-lying properties.

The restoration of Old Field Creek is estimated to cost $800,000. The Federal Highway Administration will provide partial funding through programs called the Intermodal Surface Transportation Efficiency Act and the Transportation Equity Act for the 21st Century.

Passage of the Connecticut Coastal Management Act in 1980 created a statewide policy encouraging rehabilitation of degraded tidal wetlands. Connecticut now has one of the most extensive programs in the country and one that serves as a model for restoration efforts nationwide.

Since 1980 the DEP's Office of Long Island Sound Programs, in partnership with federal, municipal, and private nonprofit organizations, has been systematically restoring degraded tidal wetlands along Connecticut's coast. To date, more than 1,700 acres of wetlands have been restored. Restoration reestablishes important wetland functions, enhancing productivity of coastal waters, increasing production of fish, and supporting a greater use by birds such as herons, shorebirds, and waterfowl. Restoration also reduces mosquito-breeding areas and eliminates fire hazards.

Connecticut was the first state to use federal transportation funds in the restoration of tidal wetlands impacted by road and bridge construction. Federal highways funds also aided in the restoration of Mill Meadows Marsh in Old Saybrook, where an undersized culvert reduced the inflow of tidal water to the marsh resulting in a drop in the water table, loss of elevation, and the loss of essential wildlife and fish habitat. In 1999 an additional 3-foot-diameter culvert was added alongside the existing culvert to restore appropriate tide levels. The new culvert can be closed in advance of a forecast flood event to ensure flood protection.

To view the complete press release, visit http://dep.state.ct.us/whatshap/press/2003/mf0218.htm.

To post your restoration news and announcements, please send information to restorationupdate@tetratech-ffx.com.

Upcoming Conferences and Events

New Listings

Working at a Watershed Level
Bristol, Virginia
May 5–6, 2003

This 2-day workshop will provide an overview and detailed information on mining issues, agriculture, TMDLs, silviculture, and storm water management. It is designed for watershed group members, public agency staff, and representatives from the private sector. Teaching tools include presentations by experienced practitioners, regional case studies, an exhibition area, and a workshop notebook.

For more information on the course, contact the Eastern Coal Regional Roundtable at info@easterncoal.org or visit www.easterncoal.org or www.watershedtraining.net.

Managing Rivers as Life-Sustaining Corridors
May 12–15, 2003
Shepherdstown, West Virginia

This workshop will allow the U.S. Fish and Wildlife Service to share with and teach others about the techniques the agency has developed in river management. The workshop will also provide an opportunity other river-managing agencies to share their experiences and successes. Session topics will include discussions about managing invasive species, river restoration and bioengineering, thinking like a watershed, and other river-management topics. For more information, visit http://www.river-management.org/workshop/index.html.

Fourth National Workshop on Constructed Wetlands: BMPs for Nutrient Reduction and Coastal Water Protection
June 23–25, 2003
Wilmington, North Carolina

This conference is sponsored by EPA's Gulf of Mexico Program Office. Sessions offered at this conference will provide information on coastal plain restoration and explain how a constructed wetland can serve as a method of nutrient reduction in lakes and rivers, based on several case studies. Posters and papers will also be presented addressing watershed management and water quality protection. For more information, visit www.cals.ncsu.edu/waste_mgt/workshop.htm or contact Dr. Frank J. Humenik, College

of Agriculture and Life Sciences, Campus Box 7927, North Carolina State University, Raleigh, NC 27695-7927. E-mail: frank_humenik@ncsu.edu; phone: 919-515-6767.

Center for Watershed Protection Training Workshops

The Center for Watershed Protection offers training that provides watershed managers with the skills to protect, manage, and restore streams, lakes, and rivers. Workshops provide communities with specific guidance on the types and combinations of watershed protection and restoration tools to apply, leading to more effective local watershed protection and restoration efforts.

The Center conducts several workshops each month on various watershed planning, storm water management, and better site design topics. The watershed curricula are continuously updated with the latest advances in watershed research and implementation. To read more about the workshops offered, visit www.cwp.org, or contact Jennifer Zielinski at jaz@cwp.org to inquire about availability.

Previous Listings

Lessons Learned: Gateway to Flood Mitigation
St. Louis, Missouri
May 11–14, 2003

The Association of State Floodplain Managers invites environmental professionals, including engineers, consultants, nonprofit organization staff, researchers, and educators dealing with all aspects of floodplain management, to attend its annual conference. The conference will offer concurrent sessions, training workshops, technical field tours, plenary sessions, and networking events that address the many problems and issues associated with reducing flood damages, managing floodplain resources, and making communities more sustainable. Program sessions will address a wide range of topics such as watershed planning and management, riparian protection, coastal zone mapping, and environmental impacts. For more information, visit www.floods.org/home/default.asp or contact Diane Brown, Association of State Floodplain Managers at diane@floods.org or by phone at 608-274-0123.

Wetland Stewardship: Changing Landscapes and Interdisciplinary Challenges
June 8–13, 2003
New Orleans, Louisiana

The conference will focus on understanding the interdisciplinary scientific needs and innovative approaches for the stewardship of wetland ecosystems across ever-changing landscapes. Discussions will address how to develop the science and approaches needed to meet the challenges of stewardship across diverse and changing geographic landscapes, sociopolitical boundaries, scientific disciplines, and varying scales of assessment. The coupling of traditional and applied wetland sciences with ecological, physical, engineering, economic, and social sciences will be highlighted. Awards will be given for the best student paper and best student poster.

For further information contact one of the Program Committee co-chairs: Doug Meffert (dmeffert@tulane.edu) or Robert Twilley (ceet@louisiana.edu) or visit the Web site www.sws.org/neworleans/welcome.htm.

To post your restoration news and announcements, please send information to restorationupdate@tetratech-ffx.com.

Restoration-Related Web Sites

http://www.shorebirdworld.org/
Shorebird World. Shorebird World is dedicated to promoting understanding and awareness of the natural history of shorebirds; the enormous conservation challenges they face throughout their migratory ranges; and the cooperative, international research, and conservation efforts under way to help ensure their survival. *This Web site provides links to the United States and Canada's shorebird conservation plans including the work that is being done to protect their shoreline and wetland habitats.*

http://www.swfwmd.state.fl.us/greenswmp/greenswamp.html
Interactive Green Swamp. Green Swamp encompasses 560,000 acres of cypress swamps, hardwood forests, marshes, pine flatwoods, and sandhills located between Orlando and Tampa. This educational site provides information on the history of the area, its significance, and a description of the flora and fauna native to the various wetland types. The entire site is accompanied by detailed interactive graphics of the natural appearance of the wetland areas. *This Web site would be useful for educators looking for interactive information about wetland areas.*

http://www.deschuteswatersheds.org/udwc/whatdowedo.html
Upper Deschutes Watershed Council. The goals of the Council are to improve knowledge about the current health of the watershed, to create awareness and understanding of the value of healthy watersheds, and to facilitate efforts that enhance, restore, and protect the in-stream water quality, fish and wildlife habitat, and ecosystem functions. *This Web site provides information on the projects the Council is taking part in to restore the Deschutes Watershed.*

http://www.nehalemtel.net/~lnwcouncil/
Lower Nehalem Watershed Council. The Council is dedicated to the protection, preservation, and enhancement of the Nehalem watershed through leadership, cooperation, and education. This Web site provides information on the Council's action plan to restore the watershed and past and current restoration projects including culvert replacement, riparian restoration, and in-stream structure projects. *This Web site would be useful to anyone looking for a comprehensive plan initiated by a community group to restore a watershed.*

http://www.americaswetland.com/index.asp
America's Wetland. In the largest public awareness initiative in its history, Louisiana is leading *America's Wetland: Campaign to Save Coastal Louisiana.* The campaign will raise awareness of the impact of Louisiana's wetland loss and increase support for efforts to conserve and save coastal

Louisiana. This Web site provides an overview of the campaign, information on upcoming restoration events, and press releases. *This Web site provides an overview of the comprehensive plan to restore Louisiana's coastal wetlands.*

Let us know about your restoration-related Web site. Please send relevant URLs to restorationupdate@tetratech-ffx.com.

Information Resources

EPA Region 8's New Wetland Poster

A new wetlands poster, "Vulnerable Wetlands," is available from EPA Region 8. It describes various isolated wetlands found in the region and contains several colorful photographs along with a short text that explains the importance of these wetlands and why they are vulnerable to loss. The poster also encourages the public to get involved in the monitoring of these wetlands. Contact Paul McIver at 303-312-6056 or e-mail at mciver.paul@epa.gov.

Stream Steward Restoration Guide: A Small Woodland Owner's Guide to Stream Habitat Restoration

Stream Steward Restoration Guide: A Small Woodland Owner's Guide to Stream Habitat Restoration was first published in March 2001, in partnership with Trout Unlimited, on a grant from the National Fish and Wildlife Foundation. The guide is written for private landowners who are interested in improving cold water stream habitat.

The guide incorporates lessons learned from model conservation projects and guidelines for landowners to follow in planning, implementing, and evaluating their own voluntary stream improvement projects. The easy-to-understand guide is filled with color photographs, diagrams, and sample worksheets. It provides small woodland owners with practical information on assessing and selecting a site, finding experts to assist with the project, getting funds and permits, and monitoring and maintaining the project's results.

To view the guide or download a version in PDF, visit www.affoundation.org/conservation/ssrguide.shtml.

If you'd like to publicize the availability of relevant information resources, please send information to restorationupdate@tetratech-ffx.com.